

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

List of Claims:

1-2 (Cancelled).

3. (Currently Amended) The fusion protein according to claim \pm 58, wherein said first polypeptide sequence is capable of associating with at least one MASP protein.

4. (Currently Amended) The fusion protein according to claim \pm 3, wherein said first polypeptide sequence is capable of associating with a MASP protein selected from the group consisting of MASP-1, MASP-2 and MASP-3 or functional homologues or variants hereof.

5-14 (Cancelled).

15. (Currently Amended) The fusion protein according to claim \pm 58, wherein the first polypeptide sequence comprises amino acids 1-77 of the human L-ficolin ~~sequence of figure 1~~ (SEQ ID NO: 125).

16-20 (Cancelled).

21. (Withdrawn - Currently Amended) The fusion protein according to claim \pm 58, wherein the second polypeptide sequence comprises the ~~CRD~~ carbohydrate recognition domain (CRD domain) of MBL.

22. (Withdrawn - Currently Amended) The fusion protein according to claim \pm 27, wherein the second polypeptide sequence comprises the neck region of MBL.

23 (Withdrawn - Currently Amended). The fusion protein according to claim \pm 58, wherein the second polypeptide sequence comprises the collagen-like domain of MBL.

24. (Withdrawn - Currently Amended) The fusion protein according to claim \pm 58, wherein the second polypeptide sequence comprises the neck region and the CRD domain of MBL.

25 (Withdrawn - Currently Amended). The fusion protein according to claim \pm 58, wherein the second polypeptide sequence

comprises the collagen-like domain, the neck region and the CRD domain of MBL.

26. (Currently Amended) The fusion protein according to claim \pm 58, wherein the second polypeptide sequence comprises amino acids 80-228 of the human MBL (SEQ ID NO:126) sequence shown in figure 2 (SEQ ID. NO 126).

27. (Withdrawn - Currently Amended) A The fusion protein according to claim 1, wherein the fusion protein comprises comprising (i) a first polypeptide sequence comprising the cysteine-rich region and the collagen-like domain of human L-ficolin (SEQ ID NO:125), or a substitution mutant sequence at least 95% identical to said domain, wherein said first polypeptide sequence is capable of activating the lectin-complement pathway, and (ii) a second polypeptide sequence comprising the CRD domain of human MBL (SEQ ID NO:126), or a substitution mutant sequence at least 95% identical to said CRD domain, wherein said second polypeptide sequence is capable of associating with one or more carbohydrates,

said fusion protein being capable of activating the lectin-complement pathway and associating with one or more carbohydrates,

wherein said fusion protein does not comprise human L-ficolin (SEQ ID NO:125) and does not comprise human MBL (SEQ ID NO:126).

28. (Cancelled)

29. (Withdrawn - Currently Amended) The fusion protein according to claim \pm 58, wherein the fusion protein comprises an amino acid sequence which is at least ~~70%~~ 95% identical to the sequence ~~shown in figure 3 (SEQ ID[[]] NO[[]]: 127[[]])~~.

30. (Currently Amended) The fusion protein according to claim \pm 58, wherein the fusion protein consists of the amino acid sequence as defined by the sequence ~~shown in figure 3 (SEQ ID[[]] NO[[]]: 127)~~.

31. (Withdrawn - Currently Amended) An isolated nucleic acid comprising a nucleotide sequence encoding the fusion protein

according to claim \pm 58.

32. (Withdrawn) A vector comprising the nucleic acid sequence according to claim 31.

33. (Withdrawn) A cell comprising the vector according to claim 32.

34-36 (Cancelled).

37. (Withdrawn - Currently Amended) A method of prevention and/or treatment of an infection in an individual in need thereof comprising administering to said individual an effective amount of the fusion protein according to claim \pm 58.

38. (Cancelled)

39. (Withdrawn) The method according to claim 37, wherein the individual is a human being.

40. (Withdrawn) The method according to claim 37, wherein the individual is a human being suffering from an increased risk of acquiring an infection.

41. (Withdrawn) The method according to claim 37, wherein the individual is a human being with subnormal serum MBL level.

42. (Withdrawn) The method according to claim 37, wherein the individual is a human being with normal serum MBL level.

43-48 (Cancelled).

49. (Withdrawn - Currently Amended) A pharmaceutically acceptable composition for the treatment or prevention of a clinical condition in an individual in need thereof, comprising the fusion protein according to claim \pm 58, and a pharmaceutically acceptable carrier.

50-55. (Cancelled)

56. (Withdrawn - Currently Amended) The fusion protein of claim ~~52~~ 58, wherein the first polypeptide sequence comprises at least five instances of the motif X-G-X-X-G, which instances may be the same or different.

57. (Cancelled)

58. (currently amended) ~~A The fusion protein of claim 57 in which~~ comprising

i) a first polypeptide sequence which is at least 95%

identical to a fragment, comprising at least forty consecutive amino acids, of the lectin-complement pathway activating protein is human L-ficolin (SEQ ID NO:125), differing from said fragment, if at all, solely by one or more amino acid substitutions, wherein said first polypeptide sequence is capable of activating the lectin-complement pathway, and

ii) a second polypeptide sequence which is at least 95% identical to a fragment, comprising at least fifty consecutive amino acids, of the collectin is human mannose-binding lectin (MBL) (SEQ ID NO:126), differing from said fragment, if at all, solely by one or more amino acid substitutions, wherein said second polypeptide sequence is capable of associating with one or more carbohydrates,

said fusion protein being capable of activating the lectin-complement pathway and associating with one or more carbohydrates,

wherein said fusion protein does not comprise human L-ficolin (SEQ ID NO:125) and does not comprise human MBL (SEQ ID NO:126).

59-60. (Cancelled)

61. (Withdrawn - Currently Amended) The method fusion protein of claim 57 58 wherein the first polypeptide sequence differs from the corresponding sequence of said human L-ficolin lectin-complement pathway activating protein, a fragment thereof, if at all, solely by one or more conservative substitutions, and said second polypeptide sequence differs from the corresponding sequence of said human MBL collectin, or said fragment thereof, if at all, solely by one or more conservative substitutions,

wherein a conservative substitution is the replacement of an amino acid with another amino acid of the same substitution group, the substitution groups being defined as

polar side chains (Asp, Glu, Lys, Arg, His, Asn, Gln, Ser, Thr, Tyr, and Cys),

non-polar side chains (Gly, Ala, Val, Leu, Ile, Phe, Trp, Pro, and Met),

aliphatic side chains (Gly, Ala, Val, Leu, Ile),
cyclic side chains (Phe, Tyr, Trp, His, Pro),
aromatic side chains (Phe, Tyr, Trp),
acidic side chains (Asp, Glu),
basic side chains (Lys, Arg, His),
amide side chains (Asn, Gln),
hydroxy side chains (Ser, Thr),
sulphor-containing side chains (Cys, Met), and
amino acids being monoamino-dicarboxylic acids or monoamino-
monocarboxylic-monoamidocarboxylic acids (Asp, Glu, Asn, Gln).

62. (Cancelled)

63. (Withdrawn - Currently Amended) The ~~method~~ fusion
protein of claim ~~59~~ 67 wherein the first polypeptide sequence
differs from the corresponding sequence of said human L-ficolin
~~said lectin-complement pathway activating protein,~~ a fragment
~~thereof, if at all,~~ solely by one or more conservative
substitutions, and said second polypeptide sequence differs from
the corresponding sequence of said human MBL ~~said collectin,~~ or
fragment ~~thereof, if at all,~~ solely by one or more conservative
substitutions, wherein a conservative substitution is the
replacement of an amino acid with another amino acid of the same
substitution group, the substitution groups being defined as

polar side chains (Asp, Glu, Lys, Arg, His, Asn, Gln, Ser,
Thr, Tyr, and Cys),

non-polar side chains (Gly, Ala, Val, Leu, Ile, Phe, Trp,
Pro, and Met),

aliphatic side chains (Gly, Ala, Val, Leu, Ile),

cyclic side chains (Phe, Tyr, Trp, His, Pro),

aromatic side chains (Phe, Tyr, Trp),

acidic side chains (Asp, Glu),

basic side chains (Lys, Arg, His),

amide side chains (Asn, Gln),

hydroxy side chains (Ser, Thr),

sulphor-containing side chains (Cys, Met), and

amino acids being monoamino-dicarboxylic acids or monoamino-

monocarboxylic-monoamidocarboxylic acids (Asp, Glu, Asn, Gln).

64-66. (Cancelled)

67. (Withdrawn - Currently Amended) A ~~The~~ fusion protein of claim 1, comprising (i) a first polypeptide sequence which comprises at least amino acids 1-54 1-44 of human L-ficolin (SEQ ID NO:125), or a substitution mutant sequence at least 95% identical thereto, wherein said first polypeptide sequence is capable of activating the lectin-complement pathway, and (ii) a second polypeptide sequence which comprises at least amino acids 100-200 of human MBL (SEQ ID NO:126), or a substitution mutant sequence at least 95% identical thereto, wherein said second polypeptide sequence is capable of associating with one or more carbohydrates,

said fusion protein being capable of activating the lectin-complement pathway and associating with one or more carbohydrates,

wherein said fusion protein does not comprise human L-ficolin (SEQ ID NO:125) and does not comprise human MBL (SEQ ID NO:126).

68. (Withdrawn - Currently Amended) The fusion protein of claim 1 ~~67~~, comprising (i) a first polypeptide sequence which comprises at least amino acids 1-54 1-44 of human L-ficolin (SEQ ID NO:125), and (ii) a second polypeptide sequence which comprises at least amino acids 100-200 of human MBL (SEQ ID NO:126).

69. (Cancelled)

70. (New) The fusion protein of claim 27 comprising (i) a first polypeptide sequence comprising the collagen-like domain of human L-ficolin (SEQ ID NO:125), and (ii) a second polypeptide sequence comprising the CRD domain of human MBL (SEQ ID NO:126).

71. (New) The fusion protein of claim 27, further comprising the cysteine-rich region of human L-ficolin (SEQ ID NO:125), or a sequence at least 95% identical thereto.

72. (New) The fusion protein of claim 70, further comprising the cysteine-rich region of human L-ficolin (SEQ ID NO:125).

73. (New) The fusion protein of claim 72, further comprising the neck region of human MBL (SEQ ID NO:126).

74. (New) The fusion protein of claim 27 wherein the first polypeptide sequence differs from the corresponding sequence of said human L-ficolin fragment, if at all, solely by one or more conservative substitutions, and said second polypeptide sequence differs from the corresponding sequence of said human MBL fragment, if at all, solely by one or more conservative substitutions,

wherein a conservative substitution is the replacement of an amino acid with another amino acid of the same substitution, the substitution groups being defined as

polar side chains (Asp, Glu, Lys, Arg, His, Asn, Gln, Ser, Thr, Tyr, and Cys),

non-polar side chains (Gly, Ala, Val, Leu, Ile, Phe, Trp, Pro, and Met),

aliphatic side chains (Gly, Ala, Val, Leu, Ile),

cyclic side chains (Phe, Tyr, Trp, His, Pro),

aromatic side chains (Phe, Tyr, Trp),

acidic side chains (Asp, Glu),

basic side chains (Lys, Arg, His),

amide side chains (Asn, Gln),

hydroxy side chains (Ser, Thr),

sulphur-containing side chains (Cys, Met), and

amino acids being monoamino-dicarboxylic acids or monoamino-monocarboxylic-monoamidocarboxylic acids (Asp, Glu, Asn, Gln).

75. (New) The fusion protein of claim 71 wherein the first polypeptide sequence differs from the corresponding sequence of said human L-ficolin fragment, if at all, solely by one or more conservative substitutions, and said second polypeptide sequence differs from the corresponding sequence of said human MBL fragment, if at all, solely by one or more conservative substitutions,

wherein a conservative substitution is the replacement of an amino acid with another amino acid of the same substitution,

the substitution groups being defined as

polar side chains (Asp, Glu, Lys, Arg, His, Asn, Gln, Ser, Thr, Tyr, and Cys),

non-polar side chains (Gly, Ala, Val, Leu, Ile, Phe, Trp, Pro, and Met),

aliphatic side chains (Gly, Ala, Val, Leu, Ile),

cyclic side chains (Phe, Tyr, Trp, His, Pro),

aromatic side chains (Phe, Tyr, Trp),

acidic side chains (Asp, Glu),

basic side chains (Lys, Arg, His),

amide side chains (Asn, Gln),

hydroxy side chains (Ser, Thr),

sulphur-containing side chains (Cys, Met), and

amino acids being monoamino-dicarboxylic acids or monoamino-monocarboxylic-monoamidocarboxylic acids (Asp, Glu, Asn, Gln).

76. (New) The fusion protein of claim 58, comprising i) a first polypeptide sequence which is a fragment, comprising at least forty consecutive amino acids, of the lectin-complement pathway activating protein human L-ficolin (SEQ ID NO:125), wherein said first polypeptide sequence is capable of activating the lectin-complement pathway, and

ii) a second polypeptide sequence which is a fragment, comprising at least fifty consecutive amino acids, of the collectin human mannose-binding lectin (MBL) (SEQ ID NO:126), wherein said second polypeptide sequence is capable of associating with one or more carbohydrates.

77. (New) The fusion protein of claim 58, wherein said first polypeptide is at least 95% identical to a fragment, comprising at least fifty consecutive amino acids, of human L-ficolin (SEQ ID NO:125).

78. (New) The fusion protein of claim 77, wherein said first polypeptide is identical to a fragment, comprising at least fifty consecutive amino acids, of human L-ficolin (SEQ ID NO:125).

79. (New) The fusion protein of claim 67 wherein said first polypeptide sequence comprises at least amino acids 1-54 of human

L-ficolin, or a sequence at least 95% identical thereto.

80. (New) The fusion protein of claim 67 wherein said first polypeptide sequence comprises at least amino acids 1-54 of human L-ficolin.

81. (New) The fusion protein of claim 67 wherein said first polypeptide sequence comprises at least amino acids 1-57 of human L-ficolin, or a sequence at least 95% identical thereto.

82. (New) The fusion protein of claim 67 wherein said first polypeptide sequence comprises at least amino acids 1-57 of human L-ficolin.

83. (New) The fusion protein of claim 67 wherein said first polypeptide sequence comprises at least amino acids 1-103 of human L-ficolin, or a sequence at least 95% identical thereto.

84. (New) The fusion protein of claim 67 wherein said first polypeptide sequence comprises at least amino acids 1-103 of human L-ficolin.

85. (New) The fusion protein of claim 67 wherein said first polypeptide sequence comprises at least amino acids 1-77 of human L-ficolin, or a sequence at least 95% identical thereto.

86. (New) The fusion protein of claim 58 wherein said first polypeptide sequence further comprises amino acids 1-27 of human L-ficolin.

87. (New) The fusion protein of claim 58, which comprises (a) a collagen-like domain, which is (1) selected from the group consisting of a human L-ficolin collagen-like domain, a human MBL collagen-like domain, and a hybrid collagen-like domain comprising a first collagen-like domain fragment of the human L-ficolin collagen-like domain and a second collagen-like domain fragment of the human MBL collagen like domain, wherein, if mature human L-ficolin and mature human MBL are aligned, said first and second collagen-like domain fragments are substantially not aligned with each other, or (2) at least 95% identical to (a) (1) above, and (b) a carbohydrate recognition domain (CRD domain) which is the CRD domain of human MBL, or a sequence at least 95% identical

thereto.

88. (New) The fusion protein of claim 87 which further comprises, ahead of (a), the cysteine-rich region of L-ficolin, or a sequence at least 95% identical thereto.

89. (New) The fusion protein of claim 87 which further comprises (c) between (a) and (b), a neck region, which is (1) selected from the group consisting of a human L-ficolin sequence homologous to the neck region of human MBL, a human MBL neck region, or a hybrid of a first neck fragment of an L-ficolin sequence homologous to the neck region of human MBL and a second neck fragment of the human MBL neck region, wherein, if mature human L-ficolin and mature human MBL are aligned, said first and second neck fragments are substantially not aligned with each other, or (2) a sequence at least 95% identical to (c) (1).

90. (New) The fusion protein of claim 67 wherein the second polypeptide sequence comprises amino acids 80-228 of human MBL (SEQ ID NO:126), or a sequence at least 95% identical thereto.

91. (New) The fusion protein of claim 67 wherein the second polypeptide sequence comprises amino acids 106-228 of human MBL (SEQ ID NO:126), or a sequence at least 95% identical thereto.

92. (New) The fusion protein of claim 67 wherein the second polypeptide sequence comprises amino acids 56-228 of human MBL (SEQ ID NO:126), or a sequence at least 95% identical thereto.

93. (New) The fusion protein of claim 67 wherein the second polypeptide sequence comprises amino acids 44-228 of human MBL (SEQ ID NO:126), or a sequence at least 95% identical thereto.

94. (New) The fusion protein of claim 67 wherein the second polypeptide sequence comprises amino acids 106-228 of human MBL (SEQ ID NO:126).

95. (New) The fusion protein of claim 67 wherein the second polypeptide sequence comprises amino acids 56-228 of human MBL (SEQ ID NO:126).

96. (New) The fusion protein of claim 67 wherein the second polypeptide sequence comprises amino acids 44-228 of human MBL (SEQ ID NO:126).

97. (New) A method of prevention and/or treatment of an infection in an individual in need thereof comprising administering to said individual an effective amount of the fusion protein according to claim 27.

98. (New) A method of prevention and/or treatment of an infection in an individual in need thereof comprising administering to said individual an effective amount of the fusion protein according to claim 67.

99. (New) The fusion protein of claim 27, which does not comprise the fibrinogen-like domain of human L-ficolin.

100. (New) The fusion protein of claim 27, which does not comprise the cysteine-rich region of human MBL.

101. (New) The fusion protein of claim 100, which does not comprise the collagen-like domain of human MBL.

102. (New) The fusion protein of claim 58, which further comprises a signal peptide sequence.

103. (New) The fusion protein of claim 102, wherein said signal peptide sequence is amino acids 1-25 of SEQ ID NO:118.

104. (New) The fusion protein of claim 58 wherein said first polypeptide sequence is at least 99% identical to said L-ficolin fragment and second polypeptide sequence is at least 99% identical to said MBL fragment.

105. (New) The fusion protein of claim 58 wherein said first polypeptide sequence differs from said L-ficolin fragment, if at all, solely by a single substitution, and wherein said second polypeptide sequence differs from said MBL fragment, if at all, solely by a single substitution.

106. (New) The fusion protein of claim 58 wherein said first polypeptide sequence differs from said L-ficolin fragment, if at all, solely by a single conservative substitution, and wherein said second polypeptide sequence differs from said MBL fragment, if at all, solely by a single conservative substitution.

107. (New) The fusion protein of claim 58 wherein said L-ficolin fragment comprises at least 44 consecutive amino acids

of human L-ficolin and said MBL fragment comprises at least 185 amino acids of human MBL.

108. (New) The fusion protein of claim 58 wherein said L-ficolin fragment comprises at least 57 consecutive amino acids of human L-ficolin and said MBL fragment comprises at least 173 amino acids of human MBL.

109. (New) The fusion protein of claim 58 wherein said L-ficolin fragment comprises at least 103 consecutive amino acids of human L-ficolin and said MBL fragment comprises at least 123 amino acids of human MBL.

110. (New) The fusion protein of claim 58 wherein said L-ficolin fragment comprises at least 77 consecutive amino acids of human L-ficolin and said MBL fragment comprises at least 149 amino acids of human MBL.

111. (New) The fusion protein of claim 58 wherein said L-ficolin fragment comprises at least 44 consecutive amino acids of human L-ficolin and said MBL fragment comprises at least 123 amino acids of human MBL.

112. (New) The fusion protein of claim 72 further comprising a cysteine-rich region preceding said collagen-like domain and a neck region connecting said collagen-like domain to said CRD domain, said cysteine-rich region, collagen-like domain, neck region and CRD domain collectively comprising at least 226 amino acids.